

### ABSTRACT OF THE DISCLOSURE

The present invention describes novel nitrosated and/or nitrosylated proton pump inhibitor compounds, and novel compositions comprising at least one proton pump inhibitor compound that is optionally substituted with at least one NO and/or NO<sub>2</sub> group, and, optionally, at least one compound that donates, transfers or releases nitric oxide, stimulates endogenous synthesis of nitric oxide, elevates endogenous levels of endothelium-derived relaxing factor or is a substrate for nitric oxide synthase, and/or at least one nonsteroidal antiinflammatory drug, selective COX-2 inhibitor, antacid, bismuth-containing reagent, acid-degradable antibacterial compound, and mixtures thereof. The present invention also provides methods for treating and/or preventing gastrointestinal disorders; facilitating ulcer healing; decreasing the recurrence of ulcers; improving gastroprotective properties, anti-*Helicobacter pylori* properties or antacid properties of proton pump inhibitors; decreasing or reducing the gastrointestinal toxicity associated with the use of nonsteroidal antiinflammatory compounds; treating *Helicobacter pylori* and viral infections. The compounds and/or compositions of the present invention can also be provided in the form of a pharmaceutical kit.